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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Hidekazu KOJIMA et al.

Group Art Unit: 2613

Application No.: 09/423,461

Examiner: S. An

Filed: November 30, 1999

Docket No.: 104651

For: OPTICAL FIBER OBSERVING IMAGE PROCESSING APPARATUS

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Technology Center 2600

Sir:

In reply to the August 28, 2003 Office Action, the period for response being extended by the attached Petition for Extension of Time, reconsideration is respectfully requested in view of the following remarks.

Claims 1-6 are pending.

The Office Action rejects claims 1-6 under 35 U.S.C. §103(a) over Hattori (U.S. Patent No. 6,034,718) in view of Takahashi (U.S. Patent No. 5,522,789). The rejection is respectfully traversed.

In particular, neither Hattori nor Takahashi, individually or in combination, disclose or suggest an optical fiber observing image processing apparatus including at least image

The Office Action at page 2 admits that Hattori does not disclose or suggest this feature. However, the Office Action asserts that Takahashi discloses the feature. The assertion is respectfully traversed.

As a preliminary matter, Takahashi is non-analogous prior art and cannot be used in a 35 U.S.C. §103(a) rejection. For Takahashi to be used as a reference to reject the claims, two steps must be met: (1) Takahashi must be in the same field of endeavor; and (2) if not, then be reasonably pertinent to the particular problem with which the invention is concerned.

Takahashi is not in the same field of endeavor because the claimed invention pertains to an optical fiber observing image processing apparatus. Takahashi, on the other hand, pertains to an endoscope used to examine an inside of a body cavity three-dimensionally (see col. 1, lines 10-27). For example, the claimed invention pertains to positioning of optical axes and end faces of optical fibers that can be automatically controlled by capturing and processing image data of the optical fibers photo-taken by television cameras. Takahashi, on the other hand, pertains to a stereo endoscope that offers a limited difference in magnification between right and left subject images having a parallax between them thereby realizing optimal three-dimensionality, and cause an observer to feel less fatigued (see Takahashi at col. 3, lines 14-20).

Takahashi's objectives are not directed to the particular problem with which the invention is concerned. Takahashi at col. 2, line 64 - col. 3, line 10 discloses that when a difference in magnification between right and left images exceeds a limit, the sizes of the images differ from each other. The images therefore do not coincide and are seen doubled. The observer does not recognize the images as a stereo image and feels fatigued. The claimed invention, on the other hand, is directed to an optical fiber observing image processing apparatus in which positioning of optical axes and end faces of optical fibers that can be automatically controlled by capturing and processing image data of the optical fibers photo-

taken by television cameras. Therefore, Takahashi is not directed to the particular problem with which the invention is concerned.

Furthermore, there is no teaching, suggestion or even motivation in either Hattori or Takahashi to combine the two references. Specifically, Hattori does not even mention or provide motivation to look into endoscopes to improve on Hattori's apparatus. Further, Hattori is concerned with an optical system with predetermined magnification where an image pick-up step includes a collective observation step for shooting the whole observation area and a local observation step for shooting a part of the observation area. There is simply no reason why Hattori would incorporate Takahashi's optical system that attains a coincidence between observation points of right and left fields of view against the displacement of display points of right and left object images resulting from variations of zooming magnifications (see Abstract of Takahashi). Likewise, Takahashi does not provide suggestion or motivation that Takahashi's endoscope can be used in Hattori's optical fiber fusion-splicing apparatus. Thus, there is no basis for why one of ordinary skill in the art would have been led to modify Hattori's apparatus with Takahashi's endoscope to arrive at the claimed invention. Based on the different usages of Hattori's apparatus and Takahashi's apparatus, one can only conclude that the combination derived could have only come from the teaching of this application itself.

Applicants respectfully submit that a prima facie case of obviousness is established when the teachings of the prior art itself would have suggested the claimed subject matter to one of ordinary skill in the art (see In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). Applicants respectfully submit that, in this instance, such is not the case. Applicants respectfully submit that the use of such hindsight knowledge derived from the application to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible (W.L. Gore and Associates, Inc. V. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir, 1983), cert. Denied, 469 U.S. 851 (1984). For at least these

reasons, the combination of Hattori and Takahashi fails to teach, disclose or suggest all (or even any) of the features recited in claims 1-6.

In arguendo, even if the two references were combined, Takahashi does not make up for the deficiencies of Hattori. As mentioned above, Takahashi in Fig. 11a shows an endoscope system, and therefore, has a structure that is completely different from an image processing device for optical fiber observation as in the claimed invention. For example, Takahashi discloses a signal processing device 33 that corresponds to two cameras 2a and 2b. The specifics of the signal processing device 33 is shown in Fig. 12. As shown in Fig. 12, no microprocessor is shown. Therefore, in Takahashi, a high Boolean operation cannot be performed.

Specifically, Additionally, Takahashi at Fig. 11a in Figs. 11a and 12, and at col. 11, lines 33-53 discloses that digital signals are temporarily stored in a memory 53. The signals stored in the memory 53 are read and then converted by DA converter 57. A pulse generator 54 applies timing pulse to the driving circuit 37 and pre-processors 50a and 50b. The pulse generator also 54 applies the memory address signal and a switch signal to the memory 53. The pulse generator 54 also applies a right-left switch signal to liquid crystal glasses 39 synchronously with a display of a right or left image. In other words, the signal processing device 33 is only a frame rate converter to display a video signal of camera 2a and 2b having an inter-lace method of a low frame rate (1/30 sec.) to a monitor 35 (see Fig. 13b) having an inter-lace method of a high frame rate.

The Office Action also asserts that Fig. 15 discloses the capturing modes which are automatically switched. However, Fig. 15 shows a structure of memory 65 of one television camera in exclusive use. Specifically, Fig. 15 shows the structure of memory 65 of the signal processing unit 58 shown in Fig. 14. The signal processing unit 58 of Fig. 14 shows exclusive use of a stereo endoscope system by one television camera 31 of Fig. 13a. This disclosure has

no relationship with memory 53 of the signal processing device 33 of the stereo endoscope system of Figs. 11a and 12.


In sum, ~~Nowhere~~ nowhere does Takahashi disclose or suggest image capturing means having two or more different capturing modes regarding the capturing of the image data, and the capturing modes can automatically be switched in synchronous with or independently from progress of the image processing, as recited in independent claims 1-6.

Therefore, independent claims 1-6 define patentable subject matter. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing remarks, this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:YSC/dmw

Date: December 24, 2003

Attachment:

Petition for Extension of Time

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